This listing of claims replaces all prior versions and listings of claims in the application.

In the Claims:

1. (currently amended) An apparatus~~integrated circuit~~, comprising:

an integrated circuit, an individual one of said integrated circuit having incorporated therein

a plurality of output signal lines including a first output signal line;

a plurality of data transmitters including a plurality of default data transmitters and at least one redundancy data transmitter, each of said plurality of data transmitters being operable to transmit a data communication signal at a signal switching frequency above about 500 megahertz; and

a plurality of first connection elements each including a fuse having an electrically conductive state and an electrically high resistive state and an antifuse having an electrically high resistive state and an electrically conductive state, ~~at least~~ said fuse of a given first connection element of said plurality of first connection elements ~~having a fuse~~ conductively connecting a first default data transmitter of said plurality of default data transmitters to said first output signal line when said fuse of said given first connection element is in said electrically conductive state and said fuse of said given first connection element electrically disconnecting said first default data transmitter from said first output signal line when said fuse of said given first connection element is in said electrically high resistive state, such that when said first default data transmitter is connected to said first output signal line said first default data transmitter

is operable to transmit said data communication signal through said fuse of said given first connection element over said first output signal line,

said antifuse of said given first connection element electrically disconnecting said redundancy data transmitter from said first output signal line when said antifuse of said given first connection element is in said electrically high resistive state and said antifuse of said given first connection element conductively connecting said redundancy data transmitter to said first output signal line when said antifuse of said given first connection element is in said electrically conductive state, such that when said redundancy data transmitter is connected to said first output signal line said first redundancy data transmitter is operable to transmit said data communication signal through said antifuse of said given first connection element onto said first output signal line.

2. (currently amended) The ~~integrated circuit~~apparatus of claim 1, further comprising a plurality of second connection elements, each including a second fuse having an electrically conductive state and an electrically high resistive state, ~~at least one of~~ said second ~~fuses~~ fuse of a given second connection element of said plurality of second connection elements conductively connecting said first default data transmitter to a first input signal line when said second fuse of said given second connection element is in said electrically conductive state and said second fuse of said given second connection element electrically disconnecting said first default data transmitter from said first input

signal line when said second fuse of said given second connection element is in said electrically high resistive state, each of said ~~first~~ second connection ~~element~~ elements further including a second antifuse having an electrically high resistive state and an electrically conductive state, said second antifuse of said given second connection element electrically disconnecting said redundancy data transmitter from said first input signal line when said second antifuse of said given second connection element is in said electrically high resistive state and said second antifuse of said given second connection element conductively connecting said redundancy data transmitter to said first input signal line when said second antifuse of said given second connection element is in said electrically conductive state.

3-5. (cancelled)

6. (currently amended) The ~~integrated circuit~~apparatus of claim 21 wherein each of said first connection ~~element~~ elements further includes a first antifuse and each of said second connection ~~element~~ elements further includes a second antifuse, wherein said first antifuse of said given first connection element conductively connects said redundancy data transmitter to said first output signal line when said first antifuse of said given first connection element is in a low impedance state and said first antifuse of said given first connection element electrically disconnects said redundancy data transmitter from said first output signal line when said first antifuse of said given first

connection element is in a high impedance state and said second antifuse of said given second connection element conductively connects said redundancy data transmitter to said first input signal line when said second ~~fuse~~ antifuse of said given second connection element is in said ~~a~~ low impedance state and said second antifuse of said given second connection element electrically disconnects said redundancy data transmitter from said first input signal line when said second ~~fuse~~ antifuse of said given second connection element is in said ~~a~~ high impedance state.

7-9. (cancelled)

10. (currently amended) The ~~integrated circuit~~apparatus of claim 22 wherein said first and second MEM switches of said given first and second connection elements include MEM switches of the type having a signal pad restrained by a plurality of hinge brackets for movement in a substantially vertical direction in response to electrostatic force to switch between a connecting state and a disconnecting state.

11. (currently amended) The ~~integrated circuit~~apparatus of claim 2 wherein each of said default data transmitters provides a pair of differential signal outputs and receives a pair of differential signal inputs, such that said first output signal line includes a pair of differential signal conductors for receiving said differential signal outputs and said first input signal line includes a pair of differential signal conductors for providing said

differential signal inputs.

12-20. (cancelled)

21. (currently amended) An apparatus ~~integrated circuit~~, comprising:

an integrated circuit, an individual one of said integrated circuit having incorporated therein

a plurality of output signal lines including a first output signal line;

a plurality of input signal lines including a first input signal line;

a plurality of data transmitters including a plurality of default data transmitters and at least one redundancy data transmitter, each of said plurality of data transmitters being operable to transmit a data communication signal at a signal switching frequency above about 500 megahertz; and

a plurality of first connection elements each including a first fuse having an electrically conductive state and an electrically high resistive state, ~~at least one of~~ said first ~~fuses~~ fuse of a given first connection element of said plurality of first connection elements conductively connecting a first default data transmitter of said plurality of default data transmitters to said first output signal line when said first fuse of said given first connection element is in said electrically conductive state and said first fuse of said given first connection element electrically disconnecting said first default data transmitter from said first output signal line when said first fuse of said given first

connection element is in said electrically high resistive state, such that when said first default data transmitter is connected to said first output signal line said first default data transmitter is operable to transmit said data communication signal through said first fuse of said given first connection element onto said first output signal line; and

a plurality of second connection elements each including a second fuse having an electrically conductive state and an electrically high resistive state, ~~at least one of~~ said second ~~fuses~~ fuse of a given second connection element of said plurality of second connection elements conductively connecting said first default data transmitter to said first input signal line when said second fuse of said given second connection element is in said electrically conductive state and said second fuse of said given second connection element electrically disconnecting said first default data transmitter from said first input signal line when said second fuse of said given second connection element is in said electrically high resistive state.

22. (currently amended) An apparatus~~integrated circuit~~, comprising:

an integrated circuit, an individual one of said integrated circuit having incorporated therein

a plurality of output signal lines including a first output signal line;

a plurality of input signal lines including a first input signal line;

a plurality of data transmitters including a plurality of default data transmitters and at least one redundancy data transmitter, each of said plurality of data

transmitters being operable to transmit a data communication signal at a signal switching frequency above about 500 megahertz; and

a plurality of first connection elements each including a first MEM switch having an electrically conductive state and an electrically high resistive state, ~~at least one of~~ said first MEM ~~switches~~ switch of a given first connection element of said plurality of first connection elements conductively connecting a first default data transmitter of said plurality of default data transmitters to said first output signal line when said first MEM switch of said given first connection element is in said electrically conductive state and said first MEM switch of said given first connection element electrically disconnecting said first default data transmitter from said first output signal line when said first MEM switch of said given first connection element is in said electrically high resistive state, such that when said first default data transmitter is connected to said first output signal line said first default data transmitter is operable to transmit said data communication signal through said MEM switch of said given first connection element onto said first output signal line; and

a plurality of second connection elements each including a second MEM switch having an electrically conductive state and an electrically high resistive state, ~~at least one of~~ said second MEM ~~switches~~ switch of a given second connection element of said plurality of second connection elements conductively connecting said first default data transmitter to said first input signal line when said second MEM switch of said given second connection element is in said electrically conductive state and said second

MEM switch of said given second connection element electrically disconnecting said first default data transmitter from said first input signal line when said second MEM switch of said given second connection element is in said electrically high resistive state.